

UM Learn

Accessibility and Navigation in UM Learn

Learner Guide

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Document change history

This version of the document replaces all previous versions. The following table describes the most recent changes to this document.

Revision Date	Summary of Changes
February 2, 2017	<ul style="list-style-type: none">Renamed guide title to <i>Accessibility and Navigation in Brightspace Learning Environment</i>.
June 2, 2016	<ul style="list-style-type: none">Initial release.

About Web Accessibility at D2L

Web accessibility refers to how easily people with disabilities can navigate and interact with websites. Disabilities may be physical, such as vision impairments including blindness or low vision, hearing impairment such as deafness, or fine motor skills difficulty; or cognitive, such as dyslexia or attention deficit disorder. People with disabilities often use assistive technologies to help them navigate the web. An assistive technology is any device that helps a person with a disability. Common web assistive technologies include modified mice and keyboards, screen readers, and screen magnifiers.

Web accessibility occurs when websites are compatible with assistive technologies, support accessibility standards, and are easy for people to navigate and understand.

D2L follows web accessibility standards closely and works with interested clients to test the usability of products for people with disabilities. D2L believes that instructional practices should focus on helping people learn, and should not be limited by the learning management system in which the material is delivered.

Accessibility for Learning

You can adjust many features in the D2L Learning Suite to improve access for learners with disabilities. It is recommended that learners who use screen readers or screen magnifiers, or who navigate primarily by keyboard ensure that they use features and settings that best support their needs.

Accessibility Features for Screen Readers

The D2L Learning Suite includes features aimed at improving the usability of the system for learners using assistive technology. Design decisions that D2L uses to benefit screen reader users include the following items:

- Standard page design. Similar functionality appears in the same place and is accessed in the same way across tools.
- Simple heading structure across all tools. Heading 1 is used for page titles. Heading 2 is used for widgets and major page sections. Heading 3 is used to organize information within widgets and subsections.
- Unique, contextual link names and button names.
- Title attributes on links that open the link in a new window. It is recommended that you adjust your screen reader settings to read the title attribute. When this setting is turned on, the screen reader alerts you when a link opens in a new window.
- Descriptive alternative text on all system images and graphics. UM Learn also prompts course designers to include alternative text when uploading images.
- Table row and column markup and table summaries or captions.
- Toggle icons, such as show/hide, indicate the state of the control.
- Skip navigation links and ARIA landmarks so you can skip sections of a page.

- Account settings that enable you to simplify the layout of many tools. There are specific settings related to accessibility, including system font and font size, the option to change modal dialogs to windows, and the option to turn off the HTML Editor.
- Full keyboard accessibility. The tab order is logical and tab focus is visually indicated. Drag-and-drop and other dynamic interaction features have keyboard alternatives.
- WAI-ARIA markup for links, context menus, error messages, and confirmation messages to help improve navigation.
- Support for browser and assistive technology scaling and contrast options. System content uses styles that you can overwrite using cascading style sheets (CSS); however, the complexity of the system requires detailed style sheets.

Using personal settings with assistive technology

The minibar includes a personal menu with links to tools that store your personal information and settings. To open the personal menu, select the link containing your name. There are three links on the personal menu:

- Profile - Edit your shared personal information
- Notifications - Set how you receive notifications about activity in your courses
- Account Settings - Change display settings for UM Learn

Optimizing personal account settings for assistive technology

The **Account Settings** link contains several tabs, depending on the role you have within UM Learn. You can adjust the settings in these tabs to meet your personal needs; however, the following settings might be of particular interest if you are using assistive technology devices or software applications.

In the **Account Settings** tab, consider the following configuration options:

- You can configure the **Login Destination** option to log directly into a course, rather than **My Home**. This option can simplify navigation if you are only taking a few courses.
- The **Font Face** and **Font Size** options adjust the appearance of text. Choose options that provide the best results for your needs. To adjust the size of icons, you can use a magnification tool such as the zoom feature built into most browsers.
- If you use a screen reader to navigate UM Learn, you can turn on **Show secondary windows as pop-ups**. Otherwise, some secondary pages may not be distinguishable from the main page.
- If you use a screen reader or you only use a keyboard to navigate UM Learn, you can select the **Turn off rich text editor and view source** option. Using this option, you can upload HTML content authored in an external editor.
- To automatically detect embedded videos, turn on the **Optimize video presentation for programmatically-driven assistive technologies** option.

In the **Discussions** tab, consider the following configuration options:

- To simplify the layout of discussion lists, turn off the **Always show the Discussions List pane** option.
- Turn off the preview pane and show topics in grid view.

The **Metadata** tab is available only to administrators and instructors. Consider the following configuration option:

- To simplify movement through the main metadata page, select the **Basic** and **Expand all Categories** options.

Navigating UM Learn

UM Learn enables you to access course material online. Within the system, there are a number of learning tools that contain course content. This section of the guide discusses how the system is laid out, and how different functionality, settings, and preferences benefit individuals that navigate the system using a screen reader or other assistive technology that interprets the contents of a page.

Different assistive technologies have specific functionality, shortcuts, and commands. Ensure that you review the help material for your assistive technology to ensure you are getting the most benefit and assistance.

Logging in to UM Learn using assistive technology

By default, the Login page for UM Learn has three form elements: Username, Password, and Log in. The Username field has focus when you enter the page. The Password field and Log in button are the next tab options. Your institution might have customized the Login page to display different form elements.

Logging out of UM Learn using assistive technology

The Logout link is available in your personal menu on the minibar at the top of all pages. The personal menu opens when you click your name on the minibar. You can open the personal menu using an assistive technology's links list, or by tabbing through the minibar links at the top of the page.

Your institution might have a policy to automatically log you out of the system if you are inactive for an extended period of time. Your administrator can determine the amount of inactive time before you are automatically logged out. A JavaScript warning provides an option to remain logged in before your time expires.

Understanding site organization using assistive technology

UM Learn is organized into two levels of information. Organization-related information that appears on My Home, and course-related information that appears on Course Home and different course tools.

My Home

When you log in UM Learn, My Home is the first page you access. It is a central area for checking institution-wide news and events, and opening organization-level tools.

Like all pages in UM Learn, My home has a navigation area across the top of the page that includes the minibar and the navbar. The minibar contains links and menus specific to you, such as links to your courses and alerts about events on

your calendar. The navbar contains links to different tools. Since My Home is an organization-level page, the links on the navbar for My Home usually go to organization-level or course-independent tools, such as your personal Locker, Email, and ePortfolio. For screen readers and other assistive technology, the navbar has a hidden default Heading 2 called Navigation, and it is organized using ordered lists. There might be other headings depending on institution configuration needs.

Other My Home content is organized into Widgets. Typical widgets include Announcements, My Courses, Tasks, and Calendar. Using an assistive technology program, you can navigate and search for widgets using Heading 2, and navigate across sections using Heading 3.

One of the main purposes of My Home is to provide access to organization-level tools and information. If you are using a screen reader, you can view a list of links or headings on My Home to familiarize yourself with the available options.

Course Home

Course Home is the first page you visit when you enter a course. To access a Course Home, you must select it from the course selector on the minibar, select it from the My Courses widget, or use the search feature to find the course. If you are using the My Courses widget and have more than one role in UM Learn (for example, you are both a graduate student and a teaching assistant), you select the role tab, and then view the courses for that role. Depending on the screen reader, tabs might be read as tabs or links. In both cases, tabs are read as the first content immediately following the widget heading.

Course Home is a central area for accessing course-specific information. Like My Home, Course Home pages have a navigation area across the top of the page, and a number of widgets that contain information and links. Information and links on Course Home are specific to the course, unless the information relates to course-independent tools. For example, depending on the implementation, the navigation area for Course Home contains links to Grades, Discussions, and Quizzes for that specific course. Use Heading 2 to navigate to the main Navigation area and the different course widgets.

Landmarks

Landmarks are waypoints that a screen reader uses to navigate a page. In general, UM Learn uses two landmarks:

- The navbar has a landmark called Navigation.
- The main body of all pages has a landmark called Main.

Understanding the general page layout

Pages in UM Learn have been designed so that the layout is similar across all tools. The way you interact with the navigation area, links, headings, action buttons, context menus, tables, tabs, forms, expanding and contracting text areas, pop-ups, search, and other content areas is the same on all UM Learn pages.

Using the navigation area with assistive technology

At the top of each page is a navigation area that includes the minibar and the navbar. You can skip the navigation area on any page by selecting the **Skip to main content** link.

The minibar appears at the top of every page. It contains links to My Home, a course selector that you can use to switch between courses, alerts about events and updates for you and your courses, and a personal menu for setting your preferences and logging out.

You can jump to the navbar by selecting the hidden heading **Navigation**. The navbar typically contains an unordered list of tool links for the course you are viewing. If you are not in a course, the navbar list contains tool links for My Home or a department. Depending on how the navbar was set up, the links might be organized into link groups. Link groups do not appear in the links list. You can locate link groups by checking the form fields list or navigating by button.

Using headings and ARIA landmarks with assistive technology

Headings and ARIA landmarks help you navigate pages throughout the system:

- Heading 1 and Main landmarks navigate page titles.
- Heading 2 navigates through widgets and major page sections.
- Heading 3 organizes information within widgets and page subsections.
- Navigation, Search, and Complementary ARIA landmarks provide context on a page.

Using tool navigation links and action buttons with assistive technology

Tool navigation and action buttons navigate areas and perform tasks within a specific tool. Typically, the tool navigation links divide complicated tools into different types of tasks. For example, in Grades, the tool navigation divides the **Enter Grades** and **Manage Grades** areas. Tool navigation links are available from the hidden Heading 2 **Tool Navigation**.

Action buttons control page-specific tasks. For example, the **Manage Grades** page includes a **New** action button to add grade items or categories.

Using context menus with assistive technology

Use context menus to select an action for a specific item on a list page. Every context menu has unique link text that references the item to which it applies. For example, in your Locker, files have context menus called **Actions for [file name]**. The context menu opens a menu that contains actions you can perform on that file.

Using tables with assistive technology

Tables and grids organize content within a tool. All tables use heading and table summaries or captions. In some cases, you can navigate rows of a table by check box, since some table items have a **Select [Item]** check box before the item name. In some cases, table rows have a context menu after the item name. These context menus have unique link text so you can locate the correct context menu for the item you want to interact with.

You can select multiple items from a table using the **Select [Item]** check boxes, and then choosing an action to apply to the selected items. Actions that you can apply to multiple items appear at the top and bottom of a table and use the alt

text format **[action] Selected Items**. For example, you can use a links list to choose **Select [Topic 1]** and **Select [Topic 2]**, and then choose **Edit Selected Items**.

Complex tables might have drop-down lists for filtering information in the table. For example, some tables have a **View** drop-down list to change the sort order. Most drop-downs have an **Apply** or **Go** button that initiates the action. Some drop-down options, such as the drop-down for the number of items on each page, update when you make a selection. To use these, press **ALT+Down Arrow** (for Windows or Linux) or **Option+ Down Arrow** (for Mac) to open the drop-down menu, and then use the **Up Arrow** or **Down Arrow** and **Enter** key to make a selection.

If your table consists of more than one page of items, use the **Page** drop-down list, the **Next Page** icon, or the **Previous Page** icon to navigate to other pages.

Using Forms with assistive technology

Form fields on pages in UM Learn have a logical tab order. When you press tab, the focus moves to the next location identified as a link. In most cases, you cannot progress past the first mandatory field until you have entered information into the field. Mandatory fields are designated with an asterisk (*). The last tab locations on a form are usually **Cancel** and **Save**, or another action related to completing the action, such as **Select** or **Upload**.

In some cases, you can create content using HTML Editor. The editor is fully accessible by keyboard; however, it lacks the non-visual feedback when options or formatting are selected in the editor view. You can make changes in the source view, so you can read your changes in the code as you work, or you can turn off the HTML Editor in your Account Settings. If you turn off the HTML Editor, it is replaced by basic text fields that accept HTML coding.

Some form pages contain links to additional actions that might not be recognized as form elements by your form reader. It is a good practice to check for links when filling out a form in UM Learn or other D2L products.

Most form pages provide either a conformation or error message when you submit the form using an ARIA alert. The message appears at the top of the page and should take the focus. If there are errors in your submission, the message explains each error and provides links to the appropriate fields so you can resolve the issues.

Reading Equations outside of Forms Mode with assistive technology

If you complete a quiz, survey, or self-assessment, and answer choices contain equations made with an equation editor, you might get the best experience with an assistive technology device if you do not read the equation using forms mode. Out of forms mode MathPlayer can render the equation more comprehensibly. If you read equations within forms mode, your assistive technology might read out MathML code instead of the equation.

Using treeviews and frames with assistive technology

In some tools, such as Manage Files and Email, treeviews and frames help to format complicated lists of items and options. Most of these pages have options to **Hide Tree** (as in Manage Files). A good best practice is to check a tool's settings and tool bars for ways to simplify the page layout.

Using help text with assistive technology

Many forms contain inline help. Help icons and links to additional help material appear either immediately after the page heading or section heading, or after individual fields. Read the entire contents of a form before filling it out, and look for help text or a help link immediately after a field if you have difficulty understanding the purpose of that field.

Using Expandable and Collapsible areas with assistive technology

Some pages have sections that are collapsed by default. Collapsed sections contain advanced or supplemental information that is not required to complete standard tasks. To expand a collapsed section using a keyboard or screen reader, select the appropriate **Expand** or **Show** link.

Using Load More links with assistive technology

When a list contains more items than the page currently displays, a **Load More** link appears on the bottom of the list as the final list item. Click the link to append more items to the list.

Using pop-ups with assistive technology

Some links open secondary windows for completing page-specific tasks. These links should indicate that they open in a new window using a title attribute. Use the **Down Arrow** and **Tab** keys to read the contents of the pop-up. The last options on the pop-up should be buttons to cancel or complete the task. Occasionally, these buttons are in a separate frame on the pop-up.

If you primarily navigate the web using a screen reader, it is recommended that you select the **Show secondary windows as pop-ups** option in the **Account Settings** tool.

Using Search with assistive technology

Most pages that contain lists of items or user names have a **Search For** field near the top of the page. To perform a search, enter a word or partial word in the **Search For** field and select the **Search** button or press **Enter**.

Use the **Show Search Options** link to select advanced search options.

Use the **Clear Search** link to clear the contents of the **Search For** field.

Understanding the Calendar Page layout

The Calendar displays events from multiple calendars in one view.

Using calendar view modes

The mode in which you are viewing the calendar is read to assistive technology devices as part of the Heading 1 on the calendar page. You can configure your calendar to display in **Day**, **Week**, **Month**, **Agenda**, or **List** view.

The **Agenda** view groups course events from your active course calendars by date, course, or type. Events appear in chronological order and all-day events display at the top of each grouped listing.

For learners with visual impairment, the **List** view displays all events from your active course calendars in chronological order. You can filter the List view by event type. To view more details about the event, click an event's name. If the list contains more items than fit on the page, a **Load More** link appears as the last entry on the list. To append more items to the list, click the link.

Using the default calendar

The default calendar always displays the course from which you accessed the Calendar tool. The course name appears as a link on the page. If you have permission to create course events, those events appear on the default calendar.

You can change your default calendar by selecting the link labeled with the default calendar's name. When the calendar selector opens, choose a course calendar to view. When you change your default calendar, you also switch your current course in UM Learn to correspond to the course calendar you select.

Using the calendar selector

The calendar selector appears to assistive technology as a bulleted list of available calendars. Each calendar corresponds to an individual course you are enrolled in. If one of your courses is missing from the calendar selector, you can add calendars to your list by selecting the **Add Calendar** link. Select a course link from the bulleted list to display the calendar events in the main calendar display.

If you set the calendar to display all calendars, events in the main calendar display do not indicate which course the events belong to. To distinguish which course an event is part of, select the event name to display event details.

Navigating UM Learn using a keyboard

UM Learn is a learning management system that enables you to access online course material. Users who navigate the system using a keyboard or assistive technologies that emulate a keyboard can use keyboard shortcuts and other navigation tips to more easily use the learning management system.

Using keyboard navigation

Certain keyboard keys have specific actions you can use to navigate the system

- Use the **Tab** key on your keyboard to navigate through the options on a page. Use **Shift+Tab** to return to a previous option. UM Learn highlights page elements that you can interact with (such as links, fields, and buttons) as you tab through them, which makes it easier for you to complete tasks and select options.
- Press **Enter** or **Return** to select a link or button.
- Use the **Down Arrow** and **Up Arrow** keys to navigate drop-down lists that have an **Apply** or **Go** button to select the option.
- Use **Alt+Down Arrow** keys (Windows and Linux) or **Options+Down Arrow** keys (Mac) to open drop-down lists that do not have an **Apply** or **Go** button, and then use **Up Arrow**, **Down Arrow**, and **Enter** keys to select an item from the drop-down list.
- Use the **Enter** or **Return** key to open a menu (such as a context menu, an alert, or the course selector list). Then, use the **Tab** or **Enter** key to select a link.
- Use the **Space Bar** to select a check box or radio button option.
- Use the **Down Arrow** and **Up Arrow** keys to change a radio button option.
- Do not use **Alt+F4** to close pop-up windows or pages. This action closes your browser window.

Using browser access keys

Different browsers use different keystroke combinations to activate access key shortcuts:

- For Internet Explorer 10 or higher: Use **Alt + [accesskey]** (Windows/Linux), or **Control + [Accesskey]** (Mac).
- For Firefox: Use **Alt + Shift + [accesskey]** (Windows/Linux) or **Control + [Accesskey]** (Mac).
- For Chrome: Use **Alt + [accesskey]** (Windows/Linux), or **Control + Option + [Accesskey]** (Mac).
- For Safari: Use **Alt + [accesskey]** (Windows/Linux), or **Control + Option + [Accesskey]** (Mac).

Navigating the HTML Editor with a keyboard

There are different keyboard shortcuts that perform different navigation tasks in the HTML Editor:

- Use the **Tab** key and **Shift + Tab** to navigate through the options in the HTML editor.
- Use the **Shift + Arrow** keys to highlight content in the main area of the editor.
- Use the **Shift + Alt + Q** keys to jump to the top tool menu of the editor.
- Use the **Shift + Alt + Z** keys to jump to the main content area of the editor.
- Use the **Shift + Alt + X** keys to jump to the element path for the editor.

Accessibility features for low-vision users

Some design decisions benefit users with vision impairments who use screen magnifiers, zoom, and color contrast functionality.

- Standard page designs provide similar functionality located in the same place and accessed in the same way.
- Support for browser and assistive technology scaling and contrast options. System content uses styles that you can overwrite using cascading style sheets (CSS); however, the complexity of the system requires detailed style sheets.
- The keyboard provides a fully accessible experience. The tab order is logical and the tab focus is visually distinctive.
- Code is compliant to accessibility standards. If your screen magnifier supports basic screen reader features, such as reading the cursor location or navigating by links, you can use these features effectively.
- Account settings that enable you to simplify the layout of many tools. There are specific settings related to accessibility, including system font and font size, the option to change modal dialogs to windows, and the option to turn off the HTML Editor.
- System information is not communicated only by color.
- All pages meet WCAG 2.0 Level AA requirements for color contrast (with the exception of user-generated content).

Using Magnifier and zoom functionality

In some cases, users who have difficulty reading online and users with fine motor skills difficulty use magnifiers and zoom functionality to increase the target for selectable content such as links, icons, and form fields.

To increase the size of content in UM Learn:

- Use the Account Settings tool to increase the system font size. This increases system fonts only, not icons, other graphics, or user-created content.
- Use an assistive technology or browser that supports zooming in. This increases the magnification of the entire page. This option works well in the UM Learn as images and navigation panels resize well. Note that legacy navbars are not magnified reliably.
- Use a screen magnifier to magnify a portion of the page, such as the area around the cursor. Many users prefer screen magnifiers because they preserve the layout of the page, but allow you to focus on the content in a specific area.
- If you are using equation built with Equation Editor, Double-click on inline equations to view them at a larger size.

About D2L

A global leader in EdTech, D2L is the creator of Brightspace, the world's first integrated learning platform.

The company partners with thought-leading organizations to improve learning through data-driven technology that helps deliver a personalized experience to every learner, regardless of geography or ability. D2L's open and extensible platform is used by more than 1,100 clients and almost 15 million individual learners in higher education, K–12, healthcare, government, and the enterprise sector—including Fortune 1000 companies.

The company has operations in the United States, Canada, Europe, Australia, Brazil, and Singapore.

www.brightspace.com (<http://www.brightspace.com>) | **www.D2L.com** (<http://www.d2l.com>)

Contact Us

Phone:	1.519.772.0325 (Worldwide)
Toll Free:	1.888.772.0325 (North America) 0.808.234.4235 (United Kingdom and Europe) 0.800.452.069 (New Zealand) 1.800.656.210 (Australia) 0.800.891.4507 (Brazil)
Fax:	1.519.772.0324
Email:	info@brightspace.com
Twitter:	@Brightspace
Web:	www.brightspace.com (http://www.brightspace.com) www.D2L.com (http://www.d2l.com)

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